

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

THE SIERRA CLUB,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 2:19-cv-01284-WSS
)	
GENON POWER MIDWEST, LP,)	
)	
Defendant.)	

**DEFENDANT’S MEMORANDUM OF LAW
IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

Pursuant to LCvR 56(B)(2), Defendant GenOn Power Midwest, LP (“GenOn”), by its undersigned counsel, files its Memorandum of Law in Support of Motion for Summary Judgment:

I. INTRODUCTION

Plaintiff Sierra Club pleads two claims, one under the federal Clean Water Act, 33 U.S.C. §§ 1251-1388 (the “CWA”), and another under the Pennsylvania Clean Streams Law, 35 Pa. Cons. Stat. §§ 691.1-691.1001 (the “CSL”). Both claims stem from alleged violations of a single, one-sentence condition of the National Pollutant Discharge Elimination System (“NPDES”) Permit No. PA0001627 that the Pennsylvania Department of Environmental Protection (“PADEP”) issued for GenOn’s Cheswick Generating Station (“Cheswick”). The NPDES Permit condition at issue provides that the “discharge at Outfall 003 shall not cause a change in the stream temperature of more than 2°F during any one hour” (the “2-degree Condition”).

Sierra Club’s claims fail as a matter of law for two reasons. First, Sierra Club lacks standing to bring its claims under the CWA’s citizen suit provision because its members identified for purposes of standing lack any injury-in-fact attributable to Cheswick’s thermal discharges. Moreover, the evidence fails to establish any environmental impacts to the Allegheny River as a

result of Cheswick's thermal discharges. Under established case law, Sierra Club's claims must be dismissed for lack of standing. Second, the evidence fails to establish that GenOn violated the 2-degree Condition at issue in this case. Without a violation, Sierra Club's claims fail as a matter of law because there is no liability under either the CWA or the CSL. For these reasons, GenOn respectfully submits that it is entitled to judgment as a matter of law in its favor.

II. RELEVANT FACTUAL BACKGROUND

Pursuant to LCvR 56(B)(1), the material undisputed facts that form the basis of GenOn's request for summary judgment are set forth in the separate Concise Statement of Material Facts (the "CSOF") that is being filed contemporaneously with this Memorandum of Law in Support.

III. ARGUMENT

A. Legal Standard.

Federal Rule of Civil Procedure 56 provides in relevant part that "[t]he court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). Rule 56 "mandates the entry of summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." *Marten v. Godwin*, 499 F.3d 290, 295 (3d Cir. 2007) (quoting *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986)).

A material fact is "[a] fact[] that might affect the outcome of the suit under the governing law." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). *See also, Kaucher v. Cty. of Bucks*, 455 F.3d 418, 423 (3d Cir. 2006) ("To be material, a fact must have the potential to alter the outcome of the case."). "A genuine issue is present when a reasonable trier of fact, viewing all of the record evidence, could rationally find in favor of the non-moving party in light of his burden

of proof.” *Doe v. Abington Friends School*, 480 F.3d 252, 26 (3d Cir. 2007). A factual dispute is genuine “‘if the evidence is such that a reasonable jury could return a verdict for the nonmoving party....The mere existence of a scintilla of evidence in support of the plaintiff’s position will be insufficient; there must be [significantly probative] evidence on which the jury could reasonably find for the plaintiff.’” *Bialko v. Quaker Oats Co.*, 434 Fed. Appx. 139, 141, n. 4 (3d Cir. 2011) (quoting *Liberty Lobby*, 477 U.S. at 252 (bracketed material in original)).

“[W]hen the moving party has carried its burden under Rule 56(c), its opponent must do more than simply show that there is some metaphysical doubt as to the material facts....Where the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no genuine issue for trial.” *Scott v. Harris*, 550 U.S. 372, 380 (2007) (quoting *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87 (1986)).

B. Sierra Club Lacks Standing to Bring this Lawsuit.

1. Article III Requirements for Standing.

The requirement that a party must have standing flows from the Article III requirement of a “case or controversy.” U.S. Const., Art. III, § 2. To satisfy Article III’s standing requirements, a plaintiff must show “(1) it has suffered an ‘injury in fact’ that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and 3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.” *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180–81 (2000). Furthermore, in CWA cases, “the relevant showing for purposes of Article III standing . . . is not injury to the environment but injury to the plaintiff.” *Id.* at 181.

2. Third Circuit Precedent Addressing Article III Standing in CWA Cases.

The Third Circuit has addressed the Article III standing requirements in the context of CWA citizen suits. In *Pub. Interest Research Grp. of New Jersey, Inc. v. Powell Duffryn Terminals Inc.*, 913 F.2d 64, 71 (3d Cir. 1990), the members resided in the vicinity of the Kill Van Kull, a strait between New Jersey and Staten Island. The defendant operated a bulk storage facility and held a NPDES permit to discharge effluent into the waterway. *Id.* at 68. Unlike the instant case, discharge monitoring reports showed that the defendant had consistently and uninterruptedly discharged pollutants into the Kill Van Kull in concentrations greater than allowed by its permit. *Id.* at 69. The Third Circuit held that the Plaintiff had alleged sufficient injury to its members' aesthetic and recreational interests to support standing. *Id.* at 71. The members claimed injury to their aesthetic and recreational interests because the Kill Van Kull is polluted. For example, one member stated that he was particularly offended by the brown color and bad odor of the water. He also stated that he would birdwatch more frequently and enjoy his recreation on the Kill Van Kull more if the water were cleaner. *Id.*

As to the “traceability” prong of standing, the Third Circuit in *Powell* held that “[t]his will require more than showing a mere exceedance of a permit limit.” *Id.* at 72. “Thus if a plaintiff has alleged some harm, that the waterway is unable to support aquatic life for example, but failed to show that defendant’s effluent contains pollutants that harm aquatic life, then plaintiffs would lack standing.” *Id.* at 72-73. In *Powell*, the members complained of an oily and greasy sheen that they found offensive. *Id.* at 73. Because the defendant reported discharges of oil and grease in excess of its permit limits, the Court held that the aesthetic injury complained of by the members is fairly traceable to the defendant’s effluent. *Id.* See also, *Nat. Res. Def. Council, Inc. v. Texaco Ref. & Mktg., Inc.*, 2 F.3d 493, 505 (3d Cir. 1993) (allegations that the sight and unpleasant smell

of pollution in the vicinity of the defendant's refinery interfered with enjoyment of bird watching, swimming, boating and fishing in waterfront parks sufficiently plead injury-in-fact and traceability because defendant discharged concentrations greater than allowed by its permit.).

In contrast, in *Pub. Interest Research Grp. of New Jersey, Inc. v. Magnesium Elektron, Inc.*, 123 F.3d 111 (3d Cir. 1997), the plaintiff interest groups sued a defendant zirconium carbonate manufacturer under the CWA, alleging that it violated terms of its NPDES permit, including temperature exceedances. There was no dispute that the defendant exceeded certain numeric effluent limits when it stipulated to a number of violations of its permit. *Id.* at 115. However, despite the actual permit exceedances, the plaintiffs only alleged that their enjoyment of the waterway was lessened because they *generally knew* that the defendant polluted it—not because their interests had been affected. *Id.* at 120. The Court held that this was insufficient to support standing because “absent a showing of actual, tangible injury to the River or its immediate surroundings, [the plaintiff's] members are no less ‘concerned bystanders’ than any other citizen who takes an interest in our environment.” *Id.* Significantly, the Court noted that the members do not allege any injury to the Delaware River. For example, “[t]hey have not cited any increases in the River's salinity, or a decrease in the number of fish, or any other negative change in the River's ecosystem.” *Id.* In reaching its holding, the Court drew a clear distinction from the standing allegations in the *Powell* and *Texaco* cases. *Id.*

Additionally, the Court held that “the reduction in a person's recreational activity cannot support the injury prong of standing when a court also concludes that a polluter's violation of an effluent standard has not harmed the affected waterway and that it, in fact, poses no threat to that waterway.” *Magnesium Elektron*, 123 F.3d at 121. In this regard, the defendant presented a scientific evaluation that its temperature exceedances (which were actual documented violations

of the permit) did not have any harmful effects on or threaten the ecosystem of the waterway. *Id.* at 123. Therefore, the Court held that the plaintiffs could not show actual injury or even a threat of injury to the Delaware River that resulted from the defendant's temperature exceedances. *Id.*

Similarly, in *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 179 F.3d 107, 110 (4th Cir. 1999), environmental organizations brought a CWA citizen's suit against the operator of a smelting facility, alleging violations of the operator's NPDES permit and seeking declaratory and injunctive relief. The District Court dismissed the lawsuit for lack of subject matter jurisdiction because the organizations lacked standing. *Id.* at 112. On appeal, the Fourth Circuit affirmed the District Court's decision finding no injury-in-fact because "the evidence failed to establish that the waters in which [the members] recreated or used were actually, or in imminent threat of being, adversely affected by pollution." *Id.* at 113. More specifically, the Fourth Circuit noted that "there were no toxicity tests, or tests or studies of any kind, performed" on the waters used by the members, and none of the members testified about any "observable negative impacts on the waters they used or the surrounding ecosystem of such water." *Id.* at 114. "Their concerns were based on mere speculation as to the presence of pollution without any evidence to support their fears or establish the presence of pollutants in the allegedly affected waters." *Id.* In sum, there was simply no evidence that the waterways were adversely affected, and the members' concerns, standing alone, failed to establish injury-in-fact.

3. Sierra Club's Standing Allegations Fail to Meet Article III Requirements.

The instant case is distinguishable from the *Powell* and *Texaco* cases where the Third Circuit affirmed a finding of standing based on member allegations and testimony. Instead, the standing allegations of Sierra Club's members align with those at issue in the *Magnesium Elektron*

and *Gaston Copper* cases where the Third and Fourth Circuits dismissed claims or reversed and remanded for lack of standing.

First, it is important to note that in all the cases cited above, the plaintiffs alleged that the defendants violated specific numeric effluent limitations in their permits based documented exceedances and reports submitted to the agency reflecting an actual permit exceedance. In stark contrast, this case involves a general permit condition with no numeric effluent limitation, no monitoring requirement, and no designated compliance point in the permit for monitoring. (CSOF, at ¶¶ 36-39.) Sierra Club can point to no violations in any discharge monitoring reports or other self-reporting to the agency. Sierra Club can point to no notices of violation from the PADEP related to the 2-degree Condition. (CSOF, at ¶ 40.) As such, this case is fundamentally different from other citizen suits filed under the CWA. Based on these facts alone, GenOn submits there is no genuine issue of material fact to be tried and that it is entitled to judgment as a matter of law.

Second, the allegations related to environmental, recreational and aesthetic interests are easily distinguishable from cases where the Third Circuit found the “injury-in-fact” requirement of standing to be satisfied. In *Powell* and *Texaco*, the members had specific complaints of visual impairments and foul odors that they attributed to the facilities at issue. The observations of discoloration, odor, and oily/greasy sheens on the river could be tied to the discharges of oil and grease in excess of the defendants’ NPDES permit limits. Thus, the members spoke to actual impairments to the waterway as opposed to a vague, speculative concern that impairment might occur. In contrast, the standing witnesses in the instant case could not identify any physical observations or impairments in the Allegheny River that they attributed to Cheswick. (CSOF, at ¶¶ 24, 26, 32-33.) Their allegations of environmental harm are based on general knowledge and belief regarding thermal discharges, as opposed to any visual evidence of impacts or evidence

specific to Cheswick. (CSOF, at ¶¶ 26-28, 32-34.) They both admitted that their concerns about water quality are not grounded in something that they can see or feel. (CSOF, at ¶¶ 28.) Indeed, neither standing witness had any knowledge of when Cheswick operated and had no idea if Cheswick was operating or not when they recreated in the Allegheny River. (CSOF, at ¶¶ 21-22.) Mr. Duncan testified that his knowledge of Cheswick’s thermal discharges has not prevented him from recreating in the Allegheny River, and he still does so today. (CSOF, at ¶ 31.) Ms. Jacko testified that she is less motivated to row or kayak in the Allegheny River because of a speculative concern of bacterial overgrowth that she cannot attribute to Cheswick. (CSOF, at ¶ 23.) As such, the hypothetical allegations of injury in this case are clearly distinguishable from the allegations found to be sufficient in *Powell* and *Texaco*.

Third, the allegations of injury in the instant case are very similar to the standing allegations in *Magnesium Elektron* and *Gaston Copper* where the Third and Fourth Circuits found a lack of standing. The requisite injury-in-fact must be “concrete and particularized” and “actual or imminent, not conjectural or hypothetical.” In both cases, the standing witnesses testified that they were generally concerned that the defendants’ discharges polluted the waterway and caused impairments. However, a discussion of their generalized concern, without any observable negative impact to the waterway that they could attribute to the defendants’ operations, fell far short of a showing of injury-in-fact. Importantly, statements of generic harm “usually caused” by the type of effluent discharged by a defendant, without more, cannot satisfy the injury requirement for standing. *Magnesium Elektron*, 123 F.3d at 121-122. Moreover, allegations of generic harm cannot support a claim of threatened injury when the defendant establishes that the discharges pose no threat of harm to the aquatic ecosystem. *Id.* at 122. In the instant case, Sierra Club’s standing witnesses offered nothing more than their vague and speculative concerns/beliefs about

environmental harm. Their concerns are grounded in a generalized knowledge and belief of how thermal discharges could impact a river. (CSOF, at ¶¶ 26-28, 32-34.) They have no observations or evidence specific to Cheswick’s discharges. (CSOF, at ¶¶ 23-24, 26, 30, 32-34.)

Additionally, there is undisputed evidence in the record that Cheswick’s thermal discharges are not impairing the ecosystem of the Allegheny River. Cheswick operates pursuant to a thermal variance that the PADEP granted in accordance with Section 316(a) of the CWA after determining “the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made.” (CSOF, at ¶¶ 3-4.) All previous Section 316(a) studies, including in 2011, the first year of peaking operations at Cheswick, determined that a balanced, indigenous community was maintained. (CSOF, at ¶ 13.) GenOn’s expert, Mr. Bryan Lees, evaluated the in-stream temperature monitoring collected by GenOn beginning in August 2020 and opined that the majority of the water column is minimally influenced (at or near ambient water temperatures) by the thermal plume and available for use by any potentially thermal-sensitive aquatic biota. (CSOF, at ¶¶ 8-11.)

Sierra Club has not presented any evidence to rebut the history of thermal studies or the opinions set forth by Bryan Lees in his expert report. None of Sierra Club’s experts address thermal impacts. While Dr. Ranajit Sahu makes a conclusory assertion in his expert report, he conceded that he did not conduct any studies or evaluations of alleged impacts to the Allegheny River from Cheswick’s thermal discharges. (CSOF, at ¶¶ 14-16.) Because Dr. Sahu is a mechanical engineer by education and experience (CSOF, at ¶ 17), his conclusory and unsupported assertions regarding alleged adverse thermal impacts do not create a genuine issue of material fact. Similarly, the standing witnesses’ generalized statements of concern about possible impacts to the Allegheny River do not create a genuine issue of material fact, as both witnesses conceded that

they are not biologists and have no technical expertise in assessing the ecosystem of a river. (CSOF, at ¶¶ 27, 35.)

Therefore, like the *Magnesium Elektron* case, the undisputed evidence shows that there is no impairment to the ecosystem of the river and no injury-in-fact to support standing. Sierra Club has presented unsupported and conclusory statements of general concern regarding possible impacts to the Allegheny River. Based on Third Circuit precedent, these vague and hypothetical assertions cannot establish standing, particularly where there is undisputed evidence that the thermal discharges are not impairing the river ecosystem. GenOn respectfully submits that it is entitled to judgment as a matter of law because Sierra Club lacks standing to pursue its claims.

C. Sierra Club Has Failed to Establish Liability Under the CWA.

The 2-degree Condition was applied to Cheswick for the first time in its 2018 NPDES permit. It exists as a one-sentence general condition, without any associated numerical effluent limitation, monitoring requirement, or designated point of compliance. Consistent with PADEP's Temperature Guidance, PADEP imposed the 2-degree Condition as a general condition because Cheswick does not have the capacity to violate the 2-degree Condition or is otherwise unlikely to do so under normal operating conditions. PADEP has never issued GenOn any notices of violation, indicated that Cheswick is somehow in violation or could be in violation of the 2-degree Condition, or sought to have Cheswick establish a compliance monitoring point for the purpose of evaluating compliance with the 2-degree Condition.

Sierra Club, contrary to the longstanding interpretation and application of the 2-degree Condition, seeks to re-write Cheswick's NPDES permit, re-interpret Pennsylvania administrative law, and apply an entirely new construct for the 2-degree Condition. As described below, Sierra Club's flawed (and novel) construct of the 2-degree Condition is fatal to its claims and an appropriate evaluation of the evidence shows that there is no violation of the 2-degree Condition.

1. The 2-degree Condition is a “Rate of Change” Requirement.

The 2-degree Condition is taken nearly verbatim from Pennsylvania’s regulations at 25 Pa. Code § 96.6(b):

2-degree Condition	25 Pa. Code § 96.6(b)
The discharge at Outfall 003 shall not cause a change in stream temperature of more than 2°F during any one hour.	Heated wastewater discharges may not cause a change of surface water temperature of more than 2°F during any one hour period.

A simple, side-by-side comparison of the language of these requirements leads to the inescapable conclusion that the 2-degree Condition is based upon the requirement in 25 Pa. Code § 96.6(b). Consequently, the 2-degree Condition *must* and can only be interpreted and applied consistent with the underlying regulatory requirement at 25 Pa. Code § 96.6(b).

The Pennsylvania Environmental Quality Board (“EQB”), the state agency responsible for adopting environmental regulations, and PADEP, the state agency charged with administering and enforcing the CWA and CSL in Pennsylvania, have both interpreted and applied the 2-degree Condition *and* 25 Pa. Code § 96.6(b) as a rate-of-change requirement. (CSOF, at ¶ 42.) This Court recognized this long-standing interpretation of the 2-degree Condition in its Order of April 29, 2020. *See* ECF No. 34 (“Whether GPM is violating the rate-of-change provision (Part C.I.F.) of its National Pollution Discharge Elimination System (“NPDES”) permit or is protected by a mixing zone or thermal variance implicates issues of material fact.”).

2. The 2-degree Condition Applies at the Point of “Complete Mix.”

A NPDES permit condition can only be violated at the point of compliance. Indeed, any citizen suit action involving a NPDES permit violation requires allegations that support an actual and continuing violation. *Nat. Res. Def. Council, Inc. v. Texaco Ref. and Mktg., Inc.*, 2 F.3d 493, 501 (3d Cir. 1993) (citing *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484

U.S. 49, 66 (1987)). Here, the NPDES permit for Cheswick has no monitoring requirement or designated compliance point. However, for purposes of addressing Sierra Club's claims that Cheswick is allegedly violating the 2-degree Condition, the point of compliance would be at the determined point of complete mix, consistent with PADEP's interpretation and application of the 2-degree Condition and 25 Pa. Code § 96.6(b).

For nearly 12 years, PADEP's Temperature Guidance has put Pennsylvania NPDES permittees and the public on notice that it interprets 25 Pa. Code § 96.6(b) as applying at the point of complete mix.¹ (CSOF, at ¶¶ 43-44.) This public and longstanding interpretation by the regulatory agency charged with implementing 25 Pa. Code § 96.6(b) is entitled to deference. *Del. Riverkeeper Network v. Sec. of Pa. Dep't of Env'tl. Prot.*, 870 F.3d 171, 181-82 (3d Cir. 2017) (holding that deference to a Pennsylvania administrative agency's interpretation of a Pennsylvania regulation is appropriate when the interpretation is reasonable and both "public and longstanding"). Sierra Club's claims must be viewed and assessed consistent with PADEP's historical interpretation and application of the 2-degree Condition, as applying at the point of complete mix and as a rate-of-change requirement.

Consistent with its Temperature Guidance, PADEP has issued NPDES permits applying the 2-degree Condition at the point of complete mix. GenOn's expert, Mr. Bryan Lees, has direct, personal experience working with PADEP to determine the point of compliance for the 2-degree Condition in two other NPDES permits in Pennsylvania. (CSOF, at ¶ 45.) For one of these NPDES permits, the permittee performed a one-year water temperature monitoring study under various

¹ In addition to being available to the public on PADEP's website, PADEP published notice of the Temperature Guidance in the *Pennsylvania Bulletin*: <http://www.depgreenport.state.pa.us/elibrary/PDFProvider.ashx?action=PDFStream&docID=7885&chksum=&revision=0&docName=391-2000-017.pdf&nativeExt=pdf&PromptToSave=False&Size=366928&ViewerMode=2&overlay=0> (last visited March 24, 2021).

conditions to determine the point of complete mix for purposes of assessing compliance with the 2-degree Condition. (CSOF, at ¶¶ 46-47.) In a more recent project, Mr. Lees assisted another NPDES permittee in identifying a downstream compliance point for the 2-degree Condition, which required instream temperature monitoring and a mixing zone analysis to evaluate the point at which the thermal discharge is fully mixed. (CSOF, at ¶ 49.) As Mr. Lees notes, for this second project, PADEP approved a thermal study plan that included a mixing zone analysis and would have applied the 2-degree Condition at the point of complete mix, consistent with the PADEP's longstanding interpretation. (*Id.*)

In addition to these two examples, Mr. Lees also evaluated another NPDES permit for a different Pennsylvania coal-fired power plant that, like the Cheswick Station, operates as a peaking facility. (CSOF, at ¶ 50.) Using a mixing analysis and after completing a flyover of the stream to perform imaging of the facility's thermal plume, PADEP allowed a 5000-foot mixing zone downstream of a discharge channel that receives the facility's discharge. (CSOF, at ¶ 51.) Therefore, for this particular facility, PADEP required monitoring nearly one mile downstream of the outfall in question to assess compliance with the 2-degree Condition. (*Id.*) Importantly, PADEP selected this compliance point after a mixing analysis and flyover to delineate the bounds of the thermal discharge plume.

These three different NPDES permitting examples of PADEP requiring compliance with the 2-degree Condition at or after the point of complete mix reinforce PADEP's interpretation of 25 Pa. Code § 96.6(b) in the Temperature Guidance. In the seemingly rare instances where PADEP requires a NPDES permit discharger to monitor for compliance with the 2-degree Condition, it does so at or after the point of complete mix. In this case, Sierra Club has not offered any contrary evidence to dispute the Temperature Guidance or its application in the field by PADEP as it applies

to the 2-degree Condition. Sierra Club has failed to demonstrate that any of the temperature measurements relied on its Complaint or performed since its Complaint was filed were taken at the point of complete mix. In fact, Sierra Club's proffered expert witness, Mr. Matthew Hodge testified that he performed his evaluation by assuming that the 2-degree Condition applied "anywhere where there were temperature measurements taken in the river." (CSOF, at ¶ 53.) Unlike Mr. Lees, Mr. Hodge has no experience in Pennsylvania working with PADEP to determine a compliance point for the 2-degree Condition. (CSOF, at ¶ 52.) Sierra Club's acknowledged failure to account for mixing and evaluate compliance with the 2-degree Condition at the point of complete mix is fatal to its claims.

3. Sierra Club Does Not and Cannot Prove a Violation of the 2-degree Condition.

a. *The "2018 Temperature Comparison" Cannot Support an Alleged Violation of the 2-degree Condition.*

The first set of data or information Sierra Club relies upon to support its claims is a "2018 Temperature Comparison" contained in Exhibit B of its Complaint. This comparison is comprised of temperature data collected by GenOn in 2011 for the Thermal Study that resulted in PADEP continuing Cheswick's CWA § 316(a) thermal variance in the NPDES permit. Sierra Club attempts to use 2018 Cheswick operational data that were similar to those occurring during the 2011 Thermal Study to paint a picture that Cheswick allegedly violated the 2-degree Condition. Sierra Club's reliance on the 2018 Temperature Comparison is misplaced, as this data does not and cannot show a violation of the 2-degree Condition.

Sierra Club alleges that this comparison shows that "Cheswick produced thermal plumes greater than 2°F on at least eight occasions during the current permit term in 2018." Compl. ¶ 81. Contrary to Sierra Club's allegations, creating a "thermal plume" is not equivalent to a violation of the 2-degree Condition. As this Court has already held, the 2-degree Condition is a rate-of-

change requirement, meaning that Sierra Club must demonstrate that at a downstream point of complete mix in the Allegheny River, Cheswick's thermal discharge caused the temperature of the River to change by more than 2°F over the course of an hour, after considering excluding contributions from natural background or non-Cheswick-related causes for temperature increases. The 2018 Temperature Comparison is not the product of measuring the River temperature at a fixed point and fixed water depth on an hourly basis. (*See* CSOF, at ¶ 57.) Consequently, the 2018 Temperature Comparison cannot show a violation of the rate-of-change component of the 2-degree Condition.

In addition, Sierra Club cannot show that the 2018 Temperature Comparison and the input data included therein were collected at or after the point of complete mix. In fact, such a demonstration is impossible. The entire purpose of the instream temperature monitoring conducted for the 2011 Thermal Study was to map a thermal plume², *i.e.* the unmixed area of the River where Cheswick's discharge is acknowledged to cause temperature change of 2°F or more for *any* period of time. Delineating the thermal plume allowed GenOn to conduct a fish survey to assess whether Cheswick's discharge was having any impact on fish and other aquatic life. The 2011 Thermal Study for Cheswick demonstrated that a "balanced and robust fish community" is present and not compromised by Cheswick's thermal plume, resulting in PADEP extending Cheswick's CWA § 316(a) variance in the NPDES permit. Simply put, compliance with the 2-degree Condition cannot be evaluated within the thermal plume delineated in the 2011 Thermal Study, because the thermal plume is acknowledged to be an area of the River that is not fully mixed, both laterally and vertically. Consequently, none of the data used in Sierra Club's 2018 Temperature Comparison was collected at the point of complete mix.

² As described by Mr. Lees, a thermal plume is a "surface phenomenon" within the water column and "is mostly concentrated within the top 3-ft of the water column, except for [] shallow shoreline areas." (CSOF, ¶ 54.)

b. *The 2019 Instream Temperature Data Collected by Sierra Club Cannot Support an Alleged Violation of the 2-degree Condition.*

Sierra Club's reliance on instream River temperatures it measured during four days in June, August, and October 2019 fares no better and also cannot demonstrate a violation of the 2-degree Condition. As evaluated by Mr. Lees:

[T]he [2019 temperature] data consists of random measurements of water temperature upstream and downstream of Cheswick's Outfall 003 at various water depths over approximately 2-hr periods on specific days. These data merely show the nearfield water temperatures within Cheswick's thermal plume and water temperatures upstream of Cheswick. As stated above, to properly calculate the 2°F rate of change, the measurements need to be recorded at a fixed location and water depth on at least an hourly basis at a downstream location that represents the fully-mixed condition of the thermal effluent.

(CSOF, at ¶ 58.) Random measurements of temperature downstream of Cheswick that were not collected at or after the point of complete mix at the same location and depth over the course of an hour *cannot* demonstrate a violation of the 2-degree Condition. Therefore, Sierra Club's reliance on the 2019 temperature data is flawed.

c. *Water Temperature Data Collected by GenOn from August to October 2020 Cannot Support a Violation of the 2-degree Condition.*

Coincidentally, in August 2020, GenOn began another Thermal Study as required by the NPDES permit to continue the CWA § 316(a) thermal variance. Unlike the 2011 Thermal Study, GenOn proposed and in June 2020, PADEP approved the deployment of seven buoys in the Allegheny River, one upstream and six downstream of Outfall 003, with thermistors tethered to the buoy that record water temperature at four depths: near-surface (approximately 1-foot depth), 3 feet, 7 feet, and 10 feet. The purpose of the 2020 Thermal Study temperature monitoring is to more precisely delineate the thermal plume within which GenOn will again survey the fish and other aquatic species to determine whether a "balanced, indigenous population" of aquatic fauna

lives within the thermal plume for purposes of the CWA § 316(a) thermal variance. Importantly, these buoys and the associated 28 thermistors were *not* deployed to monitor for compliance with, or determine an appropriate compliance point for, the 2-degree Condition.

Mr. Lees performed a comprehensive evaluation of the temperature data collected at these buoys between August and October 2020. More specifically, Mr. Lees analyzed the 2020 temperature data to determine whether any of the buoys or thermistors are located at the point of complete mix. (CSOF, at ¶¶ 60-62.) Employing a relatively simple method of comparing measured temperatures at each of the thermistor depths for each of the buoys, Mr. Lees assessed whether temperatures were equal or nearly equal when Cheswick was operating during these months. (CSOF, at ¶ 63.) In Mr. Lees' opinion, the fully mixed or complete mix location is at the point or points where the differences in measured temperature values laterally and vertically are close to zero under all River conditions (*i.e.*, River flow, Cheswick's generation rate, ambient water temperature, and other factors). (*Id.*)

Mr. Lees' evaluation of the 2020 temperature data demonstrates that vertical temperature stratification was present at all or most of the downstream buoy locations between August and October 2020.³ (CSOF, at ¶ 64.) By comparison, the upstream buoy location (Buoy A) did not show vertical temperature stratification during these months. (*Id.*) Per Mr. Lees' evaluation, the buoys GenOn deployed to more precisely delineate the thermal plume are doing exactly that: demonstrating that the thermal plume caused by Cheswick's discharge exists primarily with the one to three feet depths in the water column of the Allegheny River.

³ Mr. Lees noted that vertical temperature stratification did not exist at Buoy B during October 2020, but he believes this was caused by the high Allegheny River flows during this month, which "changed the trajectory and location of the thermal plume in relation to Buoy B." (CSOF, at ¶ 64.)

As conclusively demonstrated by Mr. Lees' evaluation, none of the buoys are measuring temperature at the point of complete mix. Consequently, data collected at them cannot be used to prove or show non-compliance with the 2-degree Condition. Therefore, Sierra Club's reliance on the 2020 temperature data in an attempt to show that Cheswick has allegedly violated the 2-degree Condition must fail.

IV. CONCLUSION

For the foregoing reasons, the undisputed evidence demonstrates that Sierra Club lacks standing to pursue its claims. In addition to lacking standing to assert claims of the 2-degree Condition, Sierra Club's claims depend on a novel interpretation and application of the 2-degree Condition that is contrary to PADEP's public and longstanding interpretation and application of the same. There is no evidence presented by Sierra Club to dispute this interpretation and application of the 2-degree Condition in Pennsylvania. Assessing Sierra Club's claims using the correct interpretation and application of the 2-degree Condition demonstrates that none of the data and evidence proffered by Sierra Club can be used to demonstrate that Cheswick has or will violate the 2-degree Condition. GenOn respectfully submits that it is entitled to judgment as a matter of law and Sierra Club's claims must be dismissed with prejudice.

Dated: March 30, 2021

/s/ Alana E. Fortna
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CERTIFICATE OF SERVICE

I certify on this 30th day of March, 2021, I served the foregoing Defendant GenOn Power Midwest LP's Memorandum of Law in Support of Motion for Summary Judgment via the Court's ECF electronic filing system on the following counsel of record:

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